

**REMARKS****Withdrawal of Claims 35 and 38 (Item 3 of Office Action)**

Claims 35 and 38 have been withdrawn from consideration, as they are said to be directed to a non-elected invention.

Applicants disagree with the reasons for withdrawal, and have addressed the withdrawal of Claims 35 and 38 in a Petition from Requirement for Restriction Under 37 C.F.R. § 1.144 being filed concurrently with this Amendment After Final Rejection.

**Rejection of Claims 10, 14, 33, 34, 36 and 37 Under 35 U.S.C. § 102(b) (Item 4 of Office Action)**

Claims 10, 14, 33, 34, 36 and 37 have been rejected under 35 U.S.C. § 102(b), as they are said to be anticipated by Reams (W.M. Reams, *J. Invest. Dermatol.* 49:552-558, 1967).

Claim 10 has been amended to make clear that the claimed method is a method of maintaining hair color by inhibition of apoptosis after injury to the skin or hair follicles. The result of apoptosis of melanocytes is the greying of hair. See page 14, lines 12-18.

Claim 10 and Claim 14 have been amended to make clear that the method employs an effective amount of a neurotrophin or a fragment thereof. See page 26, lines 15-20 of the specification.

Reams performed his studies on newborn mice, observing the control mice and the mice injected with nerve growth factor (NGF) only up until the age of 15 days at the oldest. The newborn mice were not subjected to any injury to the skin or hair follicles, and were not susceptible to hair greying associated with aging. Therefore, Reams did not carry out the method of Claim 10.

The Examiner does not specifically address how Reams illustrates a method of inducing or maintaining skin color in a vertebrate, as in Claim 14. The Reams paper does not report effects of NGF on the coloration of the skin, except to note that in a ring-shaped region surrounding the center of the injection site, "Integumentary melanocytes were frequently lacking – especially in the region of the curly hairs." From this, it can be concluded that the skin in this region became *less* pigmented. Thus, a method of inducing or maintaining skin color was not demonstrated by Reams. The melanocytes were not contacted with an effective amount of a neurotrophin or a biologically active fragment thereof to induce or maintain skin color. It cannot be concluded that inducing or maintaining skin color was a necessary consequence of practicing

the method step, when the *opposite* effect was demonstrated. Therefore, the doctrine of inherency is not satisfied.

### CONCLUSION

In view of the above amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.

By Carol A. Egnor  
Carol A. Egnor  
Registration No. 38,866  
Telephone: (978) 341-0036  
Facsimile: (978) 341-0136

Concord, MA 01742-9133

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